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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,624	10/04/2001	Wesley B. Bruce	1263	1396
27310	7590	01/06/2004	EXAMINER	
PIONEER HI-BRED INTERNATIONAL INC. 7100 N.W. 62ND AVENUE P.O. BOX 1000 JOHNSTON, IA 50131			MEHTA, ASHWIN D	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .	BRUCE, WESLEY B.
Examin r	Art Unit

Ashwin Mehta

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*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 17 March 2003.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-9 is/are pending in the application.  
    4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) All    b) Some \* c) None of:  
        1. Certified copies of the priority documents have been received.  
        2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
    a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 04102003.      6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The objection to the specification for containing an embedded hyperlink is withdrawn, in light of the amendment removing the hyperlink.
3. The objection to the specification for the presence of blank lines is withdrawn, in light of the amendment replacing the lines with an ATCC accession number.
4. The objection to the specification for failing to comply with 37 CFR 1.821-1.825 is withdrawn, in light of the amendment inserting a sequence identifier in page 64.
5. The objection to claims 2, 4, and 8 is withdrawn, in light of the claim amendments.
6. The rejection of claims 1-9 under 35 U.S.C. 101 is withdrawn, in light of the declaration received March 20, 2003, under 37 CFR 1.132.
7. The rejection of claims 1-9 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, is withdrawn in light of the claim amendments.

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8. The rejection of claims 1-9 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, for lack of written descriptive support, is withdrawn in light of the claim amendments.

9. The rejections of claims 1-9 under 35 U.S.C. 102(a) and/or 35 U.S.C. 102(b) and/or 35 U.S.C. 103(a) are withdrawn, in light of the claim amendments.

***Claim Objections***

10. Claim 8 is objected to because of the following informalities: the article, --the--, should be inserted in line 4 before "polynucleotide". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

11. Claims 1-9 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, for the reasons of record stated in the Office action mailed October 17, 2002. Applicant traverses the rejection in the paper received March 20, 2003. Applicant's arguments have been fully considered but were not found fully persuasive.

Applicant's arguments do not address the aspect of the rejection concerning the production of the claimed transgenic plants, and the claimed method. As discussed in the Office action mailed October 17, 2002, the specification does not teach that any transgenic plants were produced. The 132 declaration also does not indicate that transgenic plants, transformed with the

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claimed nucleic acid, were produced, and showed maximized plant utilization of available nitrogen, reduced agricultural nitrogen inputs, improved control of lateral root proliferation useful in applications in soil remediation, increased root biomass beneficial in production of specific structural carbohydrates, and stimulated root proliferation of cuttings for plant propagation. Claim 1 still encompasses nucleic acids that encode SEQ ID NO: 2. While the claim indicates that the nucleic acid encodes a root transcriptional factor, Huer et al. teach that SEQ ID NO: 2 is expressed in pollen, and not in roots. Further, Lorz et al. (WO 01/12798, cited by Applicant in the IDS submitted April 7, 2003) teach transiently transformed tobacco pollen cells transformed with the promoter of the gene that encodes SEQ ID NO: 2, operatively linked to the luciferase coding sequence. Luciferase expression was detected in mature pollen (Example 5, pages 52-52; Figures 5 and 6). The amino acid sequences of SEQ ID NO: 2 of Lorz et al. and the instant application are identical. Given the teachings of Huer et al. and Lorz et al., it is not clear what effect transgenic expression of the nucleic acids of instant claim 1 would have in transgenic plants.

Also as discussed previously, the specification provides no teaching at all as to how one would use transgenic plants in which transgenic expression of the claimed nucleic acid reduced the level of a nitrate-responsive root transcriptional factor, or that modulated the level of a nitrate-responsive root transcriptional factor in any other manner. Applicant's arguments also failed to address the issue that the specification does not teach how one skilled in the art is to use non-bacterial or non-plant host cells.

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***Summary***

12. Claims 1-9 remain rejected.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular

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communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

December 29, 2003



Ashwin D. Mehta, Ph.D.  
Primary Examiner  
Art Unit 1638